



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,007	09/30/2003	Jaya L. Jeyaseelan	80107.075US1	4850

7590 09/11/2007
LeMoine Patent Services, PLLC
c/o PortfolioIP
P.O. Box 52050
Minneapolis, MN 55402

EXAMINER

SMITH, SHEILA B

ART UNIT	PAPER NUMBER
----------	--------------

2617

MAIL DATE	DELIVERY MODE
-----------	---------------

09/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/675,007	Applicant(s) JEYASEELAN ET AL.	
	Examiner Sheila B. Smith	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-6, 10-30 is/are rejected.
- 7) ☐ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tran (U.S. Patent Number 7,065,063) in view of Wiedeman et al. (U.S. Patent Number 6,233,463).

Regarding claim 1, Tran discloses essentially all the claimed invention as set forth in the instant application, further Tran discloses system and method for balancing communication traffic loading between adjacent base stations in a mobile communications network. In addition Tran discloses a method comprising: determining a metric representing a quality of a current association between a wireless network client and an access point (which reads on column 2 lines 49-60), comparing a metric against a threshold (which reads on column 3 lines 15-20); and setting a timer for roaming attempt by a wireless network client (which reads on column 4 lines 35-51). However, Tran fails to specifically disclose setting a delay timer.

In the same field of endeavor Wiedeman et al. discloses a automatic satellite terrestrial mobile terminal roaming system and method. In addition Wiedeman et al. discloses setting a delay timer as disclosed in column 10 lines 35-41.

Therefore, it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the reference Tran with setting a delay timer as taught by Wiedeman et al. for the purpose of periodically testing for the availability of the system.

Regarding claim 2, Tran discloses essentially all the claimed invention as set forth in the instant application, further Tran discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a metric comprises a received signal strength indicator (which reads on column 2 lines 7-32).

Regarding claim 3, TRAN discloses essentially all the claimed invention as set forth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a metric comprises a current data rate (which reads on column 2 lines 7-32).

Regarding claim 4, TRAN discloses essentially all the claimed invention as set forth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a metric comprises a number of packet retries (which reads on column 2 lines 7-32).

Regarding claim 5, TRAN discloses essentially all the claimed invention as set forth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a comparing a plurality of metrics against a plurality of thresholds, and setting the timer in response (which reads on column 2 lines 7-32).

Regarding claim 6, TRAN discloses essentially all the claimed invention as set forth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a metric comprises a received signal strength indicator, and the threshold is dependent on the current data rate (which reads on column 2 lines 7-32).

Regarding claim 10, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the perceived quality of the current association is relatively low, the timer is set to a value that is relatively low (which reads on column 2 lines 7-32).

Regarding claim 11, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the perceived quality of the current association is relatively high, the timer is set to a value that is relatively high (which reads on column 2 lines 7-32).

Regarding claim 12, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses a timer comprises setting a hardware timer (which reads on column 2 lines 7-32).

Regarding claim 13, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses setting a timer comprises setting a software timer (which reads on column 2 lines 7-32).

Regarding claim 14, Tran discloses essentially all the claimed invention as set fourth in the instant application, further Tran discloses system and method for balancing communication traffic loading between adjacent base stations in a mobile communications network. In addition Tran discloses a method comprising: comparing a first metric representing a quality of a current

Art Unit: 2617

association between a wireless network client and an access point (which reads on column 2 lines 49-60), comparing a second metric further representing the quality of a current association between a wireless network against a threshold (which reads on column 3 lines 15-20); and setting a timer for roaming attempt by a wireless network client (which reads on column 4 lines 35-51). However, Tran fails to specifically disclose setting a delay timer.

In the same field of endeavor Wiedeman et al. discloses a automatic satellite terrestrial mobile terminal roaming system and method. In addition Wiedeman et al. discloses setting a delay timer as disclosed in column 10 lines 35-41.

Therefore, it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the reference Tran with setting a delay timer as taught by Wiedeman et al. for the purpose of periodically testing for the availability of the system.

Regarding claim 15, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the first metric comprises a data rate (which reads on column 2 lines 7-32).

Regarding claim 16, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses first threshold corresponds to the lowest possible data rate (which reads on column 2 lines 7-32).

Regarding claim 17, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based

location registration scheme. In addition TRAN discloses the second metric comprises a received signal strength indicator (which reads on column 2 lines 7-32).

Regarding claim 18, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the second threshold is dependent on the current data rate (which reads on column 2 lines 7-32).

Regarding claim 19, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the second value is larger than the first value (which reads on column 2 lines 7-32).

Regarding claim 20, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses comparing a percentage of missed beacons to a threshold, and conditionally attempting to roam in response (which reads on column 2 lines 7-32).

Regarding claim 21, Tran discloses essentially all the claimed invention as set fourth in the instant application, further Tran discloses system and method for balancing communication traffic loading between adjacent base stations in a mobile communications network. In addition Tran discloses a apparatus including a medium adapted to hold machine assessable instructions (which reads on a mobile phone) that when accessed result in a machine performing comparing a first metric representing a quality of a current association between a wireless network client and an access point (which reads on column 2 lines 49-60), comparing a second metric further

Art Unit: 2617

representing the quality of a current association between a wireless network metric against a threshold (which reads on column 3 lines 15-20); and setting a timer for roaming attempt by a wireless network client (which reads on column 4 lines 35-51). However, Tran fails to specifically disclose setting a delay timer.

In the same field of endeavor Wiedeman et al. discloses a automatic satellite terrestrial mobile terminal roaming system and method. In addition Wiedeman et al. discloses setting a delay timer as disclosed in column 10 lines 35-41.

Therefore, it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the reference Tran with setting a delay timer as taught by Wiedeman et al. for the purpose of periodically testing for the availability of the system.

Regarding claim 22, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the first metric comprises a data rate (which reads on column 2 lines 7-32).

Regarding claim 23, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the first threshold corresponds to the lowest possible data rate (which reads on column 2 lines 7-32).

Regarding claim 24 TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the second metric comprises a received signal strength indicator (which reads on column 2 lines 7-32).

Regarding claim 25, TRAN discloses essentially all the claimed invention as set forth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses an apparatus comprising: a radio interface to interact with a wireless network; and a processor coupled to the radio interface, wherein the processor is adapted to set a timer based on a perceived quality of a current association, and further adapted to attempt roaming when the timer expires (which reads on column 2 lines 7-32).

Regarding claim 26, TRAN discloses essentially all the claimed invention as set forth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the timer is at least partially implemented in hardware (which reads on column 2 lines 7-32).

Regarding claim 27, TRAN discloses essentially all the claimed invention as set forth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the timer is at least partially implemented in software (which reads on column 2 lines 7-32).

Regarding claim 28, Tran discloses essentially all the claimed invention as set forth in the instant application, further Tran discloses system and method for balancing communication traffic loading between adjacent base stations in a mobile communications network. In addition Tran discloses an electronic system comprising an omni-directional antenna (35) a radio interface (32) coupled to the omni-directional antenna (35) to interact with a wireless network and a processor (34) coupled to the radio interface wherein the processor (which is exhibited in figure 2) is adapted to a timer based on a metric representing a quality of a current association between

Art Unit: 2617

a wireless network client and an access point (which reads on column 2 lines 49-60), comparing a metric against a threshold (which reads on column 3 lines 15-20); and setting a timer for roaming attempt by a wireless network client (which reads on column 4 lines 35-51). However, Tran fails to specifically disclose setting a delay timer.

In the same field of endeavor Wiedeman et al. discloses a automatic satellite terrestrial mobile terminal roaming system and method. In addition Wiedeman et al. discloses setting a delay timer as disclosed in column 10 lines 35-41.

Therefore, it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the reference Tran with setting a delay timer as taught by Wiedeman et al. for the purpose of periodically testing for the availability of the system.

Regarding claim 29, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the timer is at least partially implemented in hardware (which reads on column 2 lines 7-32).

Regarding claim 30, TRAN discloses essentially all the claimed invention as set fourth in the instant application, further TRAN discloses on optimum time value of area and timer based location registration scheme. In addition TRAN discloses the timer is at least partially implemented in software (which reads on column 2 lines 7-32).

Response to Arguments

2. Applicant's arguments filed 6/12/07 have been fully considered but they are not persuasive.

Regarding applicants that Regarding claim 1, the office action alleges that Tran discloses "comparing a metric against a threshold" at column 3, lines 15-20. Applicants respectfully disagree. Applicants note that the metric referred to in the cited portion of the claim is defined in the previous clause of claim 1 as "representing a quality of a current association between a wireless network client and an access point." The cited portion of Tran describes comparing a metric (RSSI) of a "roam candidate" to a threshold. The term "roam candidate" is used in Tran to describe base stations other than the currently associated base station. Accordingly, applicants respectfully submit that Tran does not disclose, teach or suggest "comparing the metric [representing a quality of a current association between a wireless network client and an access point] against a threshold" as alleged. Still regarding claim 1, the office action alleges that Tran discloses "setting a timer for roaming attempt by a wireless network client" at column 4, lines 35-51. Applicants respectfully disagree. The cited portion of Tran describes "aging" a traffic indicator value. The aged traffic indicator is combined with the RSSI to arrive at the adjusted RSSI (RSSI_ADJ), and the adjusted RSSI value is used in roaming decisions. Applicants respectfully submit that Tran does not disclose, teach, or suggest "setting a timer to delay a roaming attempt by the wireless network client" as alleged. The examiner contends that the art of record discloses the setting a timer for roaming attempt by a wireless network client as disclosed Tran fails to specifically disclose setting a delay timer.

Art Unit: 2617

In the same field of endeavor Wiedeman et al. discloses a automatic satellite terrestrial mobile terminal roaming system and method. In addition Wiedeman et al. discloses setting a delay timer as disclosed in column 10 lines 35-41.

Therefore, it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the reference Tran with setting a delay timer as taught by Wiedeman et al. for the purpose of periodically testing for the availability of the system.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheila B. Smith whose telephone number is (571)272-7847. The examiner can normally be reached on Monday-Thursday 6:00 am - 3:00 pm.

Art Unit: 2617

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S.Smith

September 4, 2007

Jessica M. Beamer
Primary Examiner